

ABSTRACT OF THE DISCLOSURE

A lift axle suspension system to be mounted under a vehicle for selectively raising a tire wheel assembly out of engagement with a road surface which vehicle includes a lift axle mounted to a hanger bracket via a pivot connector. The hanger bracket is rigidly attached to a vehicle frame and has articulating arms pivotally connected thereto. These arms connect at their opposite ends to the axle. A pair of diaphragm chambers such as brake chambers each include upper and lower chambers separated by a flexible bladder that moves under pressurization causing a push rod affixed thereto to translate. The diaphragm chambers and push rods extending therefrom are connected in different embodiments to the hanger bracket or other rigid structures as well as the articulating arm such that movement of the push rods causes movement of the articulating arms and thus movement such as lifting of the axle.